

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

-----X
CORAL REALTY, LLC, and CORAL
CRYSTAL, LLC,

Docket No.: 1:17-cv-01007

Plaintiffs,

DECLARATION OF STEVEN HARWOOD

-against-

FEDERAL INSURANCE COMPANY,

Judge Deborah A. Batts

Defendant.
-----X

Steven Harwood, P.E., deposes and states the following under penalty of perjury:

1. I am the principal of SR Harwood Consulting Engineering, P.C., a licensed Professional Engineer with a Bachelor of Science in Civil Engineering from SUNY at Buffalo, and my Masters of Science in Civil Engineering from Columbia University in 1979. I have been active in structural engineering since 1976.
2. I was retained shortly after Coral incurred damage to their 129 building due to the adjacent 133 building's construction. (133 Third Avenue, NYC). 133 Building, a proposed narrow tower to be constructed between two existing buildings, is a heavily reinforced cast in place concrete structure. This building is North and adjacent to 129 Building. The 133 proposed elevator and stair core walls are to be 12" thick heavily reinforced cast in place concrete shear walls. The damages which caused the loss to 129 were not evident until 133 placed concrete at their fifth floor.
3. It became apparent that 133 did not use code compliant concrete wall forms. Cast in place concrete shear walls adjacent to existing buildings are required to have forms on both sides of the wall. An industry standard is to use a "stay form" which is a permanent form, a form that

remains in place after the concrete is placed, and this form keeps the concrete within the correct location, respecting property lines and required offsets from the property line, such as NYC DOB required seismic gaps.

4. 133 opted not to use any formwork at all on the 129 building side. 133 used the 129 building's North wall, a metal stud wall with an Exterior Insulation Finish System, instead of using an engineered "stay form" system. It became apparent that 133 did not use code compliant concrete wall forms when simultaneously with 133's fifth floor concrete placement the 129 building's wall was grossly overloaded due to the wet concrete pressure and became dislodged and pushed into the student's dormitory rooms, stairwell, and hallway.

5. I investigated the extent of 133's concrete construction which caused damage to 129. The results of our investigative survey determined that 133's cast in place concrete wall was 18" thick in some locations and even thicker based upon certain visual observations. The 133 wall thickness was designed to be 12". The inside face of the 133 wall was correctly located. The concrete wall thickness greater than 12 inches is the incorrectly placed concrete that damaged the 129 building .

6. Subsequent to our investigation, James Feuerborn of Thornton-Tomasetti, the appraisal panel provided their own investigation. The insurance company retained CCA Construction Consultants and they retained WDP to perform a sonar survey of the 133 cast in place wall and found that the wall thickness varied up to 20.9 inches. James Feuerborn of Thornton-Tomasetti and the Appraisal panel provided oversight on this sonar survey.

7. I met with the NYC Building Department to discuss my method to safely remove the concrete that damaged the 129 building and restore the 129 building and property back to undamaged state.

8. I provided a protocol, which was agreed upon by the NYC DOB, for the restoration work as follows:

1. Decant and isolate areas of the building directly adjacent to the North wall in question.

This would include the residence suites, the corridor and the egress passageway.

2. The First floor main entrance to the residence will have to be modified. A temporary wall will need to be installed offset from the North wall to allow work to be done at the North property line.

3. Install a temporary egress stair, as the North stair well will be temporarily closed due to the required corrective measures. This will include a sidewalk bridge and an exterior covered legal temporary egress down to grade. This is a complex temporary installation that is required to maintain the life safety of the tenants.

4. Install a temporary waterproofing, such as a flashing from the North wall onto the adjacent concrete.

5. Starting with the 5th floor, remove the 129 building's exterior wall, working from the interior.

- The objective of removal of the 129 building's exterior wall is to facilitate the safe removal of the 133 concrete walls that caused the damage.
- Removal of this concrete to the property line will isolate their invasive construction from the 129 Building.

6. Continue down to the first floor with the 133 concrete removal process and measurements.

7. Reconstruct the Façade.

8. Rebuild the interior space / finishes.

9. Remove the temporary life safety constructions.

9. The restoration /repair work required due to the damages shall be done from the "inside" of the 129 building and working towards the "outside." What has been referred to as "inside-out" construction, such as that I designed herein, is common to all construction work

being done, including demolition and reconstruction, where there is an existing adjoining building next to the proposed construction site.

10. At an appraisal session in the basement of the Plaintiff's building, and during subsequent meetings, and conversations, James Feuerborn, a top NYC forensic expert from internationally renowned engineering firm, Thorton-Tommasetti agreed with our proposed method . The method being that demolition is to be done from within the 129 building and working towards the outside, which is an unoccupied partial concrete shell of a building. Regarding demolition from the 133 side, in his opinion, he stated that the safeguards within the 129 building would be much greater than the protective corridor proposed by our method.

11. In summary the best in the forensic engineering community retained by Appraisal panel agreed that the safest way to remove the damaged concrete is to work the "inside to outside."

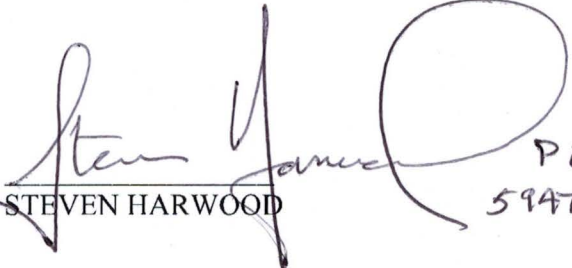
12. Further, it should be noted that the plans offered by Wayne Martin to the appraisal panel contained inaccurate corridor measurements. The actual width of the corridor rendered Defendant's plans not feasible and not workable for it would not satisfy life/safety exit requirements.

13. The plans offered by Defendant to the panel also stated that the demolition work to be performed at the 133 adjoining premises would not disturb Coral's building. Such statement was false as the incorrectly cast in place concrete was up against and in some cases interstitial within the 129 building's exterior wall. Further the demolition would subject the occupants to risk and cause vibrations and noise throughout the entire building.- Such plans were rejected by the NYC DOB.

14. It should also be noted that to the best of my knowledge, Plaintiff's building was

code compliant prior to the loss. After my proposed repair, Plaintiff's building would have no new features, nor any capital improvements. There would be no betterment.

Dated: New York, New York
January 28, 2019


STEVEN HARWOOD PE
59479

20151\15J125.180